



Application for a US patent 09/666,867

"Method and device for the rolling or winding of strip" - "Stress barrier" -

Inventors' Declaration

The cold rolling of asymmetric slit strip is problematic due to the shape of the strip profile (wedge-type strip cross section) which leads to axial shifting of the wound strip, the result being stress faults and the occurrence of lengthwise folds in the strip. When the strip flatness is determined by means of measuring rolls, such faults lead to incorrect measurements. As a consequence it is not, or only to a very limited extent, possible to perform flatness control in an automatic mode.

Therefore in practice operators resort to inserting paper between the layers of the strip during winding, which is a very costly solution. Another possibility is the cutting of the strip in order to prevent too large coil diameters which reduces the intensity of the misdirected stresses. This, however, means higher costs and lower productivity of the rolling process.

The newly developed device is a "stress barrier" that prevents stresses from being misdirected into the strip - before the strip reaches the flatness measuring roll - by means of a special roll arrangement and, primarily, by selecting an optimal angle of wrap between the strip and the rolls of the device, thus avoiding incorrect flatness measurements.

First applications in practical rolling operation have demonstrated the full effectivity of the principle of this technique as well as the associated positive effect on the economy of the (wedge-shaped) slit strip rolling process.

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